Town Seal | Town of Lenox Header

Section 15 Wireless Telecommunications Overlay District (Wtod)

5.1 PURPOSE
The Wireless Telecommunications Overlay District (WTOD) is intended to protect the scenic, historic, natural and other resources of the Town of Lenox, while allowing adequate Wireless Telecommunications to be developed

15.2 DESCRIPTION
This District includes the properties listed below. These properties are included by reason of their potential to provide technically feasible and accessible locations for the siting of facilities which can provide adequate wireless telecommunications services to the Town of Lenox. The Overlay District is defined, delineated and mapped on the Map entitled “Wireless Telecommunications Overlay District Map, Town of Lenox, MA”, and incorporated by this reference herein.

Address	Assessors’ Map & Parcel #
Junction Rtes 7 & 20	Map 17, Lot 57
Route 7	Map 17, Lots 54 & 55, 56
Route 7	Map 12, Lot 9

15.3 RELATION TO OTHER DISTRICTS
The WTOD is an overlay district mapped over other districts. It modifies and where there is inconsistency, supersedes the regulations of such other districts. Except as so modified or superseded, the regulations of the underlying districts remain in effect.

15.4 APPLICABILITY
Any use of lands within the WTOD for purposes of placement, construction, modification or removal of Personal Wireless Service Facilities and/or Towers shall be subject to the requirements of Section 15.5 of this Bylaw

15.5 PERSONAL WIRELESS SERVICE FACILITIES AND TOWERS

15.5.1 PURPOSES:

The purposes of this Personal Wireless Service Facilities and Towers Bylaw are to:
A. Preserve the character and appearance of the Town while simultaneously allowing Adequate Personal Wireless Services to be developed.
B. Protect the scenic, historic, environmental, and natural or man-made resources of the community.
C. Provide standards and requirements for regulation, placement, construction, monitoring, design, modification and removal of Personal Wireless Service Facilities and Towers.
D. Provide a procedural basis for action within a reasonable period of time for requests for authorization to place, construct, operate or modify Personal Wireless Service Facilities and Towers.
E. Preserve property values.
F. Locate Towers so that they do not have negative impacts, such as, but not limited to, visual blight, attractive nuisance, noise and falling objects, on the general safety, welfare and quality of life of the community.
G. Require owners of Personal Wireless Service Facilities and Towers to configure them so as to minimize and mitigate the adverse visual impact of the Facilities and Towers.
H. Require the clustering, sharing and camouflaging of Personal Wireless Service Facilities and Towers.

15.5.2. CONSISTENCY WITH FEDERAL LAW:
These regulations are intended to be consistent with The Telecommunications Act of 1996 in that: a) they do not prohibit or have the effect of prohibiting the provision of Personal Wireless Services; b) they are not intended to be used to unreasonably discriminate among providers of functionally equivalent Services; c) they do not regulate Personal Wireless Services on the basis of the environmental effects of radio frequency emissions to the extent that the regulated Services and Facilities comply with the FCC's regulations concerning such emissions.

15.5.3. DEFINITIONS:

ACT - The Telecommunications Act of 1996.
ADEQUATE COVERAGE - Coverage is considered to be “adequate” within that area surrounding a Base Station where the predicted or measured median field strength of the transmitted signal for at least 75% of the covered area is greater than -95 dbm. It is acceptable for there to be holes within the area of Adequate Coverage where the signal is less than -95 dbm, as long as the signal regains its strength to greater than -95 dbm further away from the Base Station. For the limited purpose of determining whether the use of a Repeater is necessary or desirable, there shall be deemed not to be Adequate Coverage within said holes. The outer boundary of the area of Adequate Coverage, however, is that location past which the signal does not regain a strength of greater than -95 dbm.

ADEQUATE CAPACITY - Capacity is considered to be "adequate" if the Grade of Service is p.05 or better for a worst case day in a preceding month, based on the Erlang B Tables, prior to the date of Application; or as measured using direct traffic measurement of the Personal Wireless Service Facility in question for existing Facilities requesting Major Modification, and where the call blocking is due to frequency contention at the antenna(s).
ANTENNA - A device which is attached to a Tower, or other structure, for transmitting and receiving electromagnetic waves.
BASE STATION - The primary sending and receiving site in a wireless telecommunications network.
CHANNEL - The segment of the radiation spectrum from an Antenna which carries one signal. An Antenna may radiate on many Channels simultaneously.
COMMUNICATION EQUIPMENT SHELTER - A structure located at a Base Station designed principally to enclose equipment used in connection with Personal Wireless Service transmissions.
DBM - Unit of measure of the power level of an electromagnetic signal expressed in decibels referenced to 1 milliwatt.
EMF - Electromagnetic Frequency Radiation
FACILITY SITE - The location within a Wireless Telecommunications Overlay District leased by one or more Personal Wireless Service Providers and upon which one or more Personal Wireless Service Facility(s) and required landscaping are located.
FACILITY/TOWER SPECIAL PERMIT (F/TSP) - The Special Permit required to be obtained in order to install any Tower or Personal Wireless Service Facility or for any Major Modification Of An Existing Facility within the Wireless Telecommunications Overlay District.
FCC - Federal Communications Commission. The Government agency responsible for regulating telecommunications in the United States.
FCC 96-326 - A Report and Order which sets new national standards for emissions of Radio Frequency emissions from FCC-regulated transmitters. This Report And Order is now contained within Title 47 Regulations, Section 1, §1.1307.
GRADE OF SERVICE - A measure of the percentage of calls which are able to connect to the Base Station, during the busiest hour of the day. Grade of Service is expressed as a number, such as p.05 - which means that 95% of callers will connect on their first try. A lower number (p.04) indicates a better Grade of Service.
HERTZ - One hertz is the frequency of an electric or magnetic field which reverses polarity once each second, or one cycle per second.
MAJOR MODIFICATION OF AN EXISTING FACILITY - Any change, or proposed change in power input or output, number of Antennas, change in Antenna type or model, repositioning of Antenna(s), change in number of Channels per Antenna above the maximum number approved under an existing Special Permit. Also any increase, or proposed increase in dimensions of an existing and permitted Tower or other structure designed to support Personal Wireless Service transmission, receiving and/or relaying antennas and/or equipment.
MAJOR MODIFICATION OF AN EXISTING REPEATER - Any removal of or change in location of any Repeater(s) from the Repeater Site(s) for which a Special Permit has been received.
MONITORING - The measurement, by the use of instruments in the field, of the radiation from a Site as a whole, or from individual Personal Wireless Service Facilities, Towers, Antennas or Repeaters.
MONITORING PROTOCOL - The testing protocol, initially the Cobbs Protocol, which is to be used to monitor the emissions from existing and new Personal Wireless Service Facilities and Repeaters upon adoption of this Article. The SPGA may, as the technology changes, require, by written regulation, the use of other testing protocols. A copy of the Monitoring Protocol shall be on file with the Board of Selectmen and the Town Clerk.
MONOPOLE - A single self-supporting vertical pole with below grade foundations.
PERSONAL WIRELESS SERVICES - Commercial Mobile Services, unlicensed wireless services, and common carrier wireless exchange access services. These services include: cellular services, personal communications services (PCS), Specialized Mobile Radio Services, and Paging Services.
PERSONAL WIRELESS SERVICE FACILITY (or FACILITY) - All equipment (excluding any Repeaters) with which a Personal Wireless Service Provider broadcasts and receives the radio-frequency waves which carry their services and all locations of said equipment or any part thereof. This Facility may be sited on one or more Towers or structure(s) owned and permitted by another owner or entity.
PERSONAL WIRELESS SERVICE PROVIDER - An entity, licensed by the FCC to provide Personal Wireless Services to individuals or institutions.
RADIATION PROPAGATION STUDIES OR RADIAL PLOTS - Computer generated estimates of the radiation emanating from Antennas or Repeaters sited on a specific Tower or structure. The height above mean sea level, power input and output, frequency output, type of antenna, antenna gain, topography of the site and its surroundings are all taken into account to create these simulations. They are the primary tool for determining whether a site will provide Adequate Coverage for the Personal Wireless Service Facility proposed for that Site.
REPEATER - A small receiver/relay transmitter of not more than 20 watts output designed to provide service to areas which are not able to receive Adequate Coverage directly from a Base Station.
REPEATER SITE - The location within the Town of Lenox leased by one or more Personal Wireless Service Providers and upon which one or more Repeater(s) and required camouflage or screening are located.
REPEATER SPECIAL PERMIT (RSP) - The Special Permit required to be obtained in order to install any Repeater, or for Major Modification Of An Existing Repeater within the Town of Lenox.
SPECIAL PERMIT GRANTING AUTHORITY (SPGA) - The Zoning Board of Appeals (ZBA) shall be the SPGA for this Article.
TELEPORT - A multi-user commercial facility utilizing satellite dishes of greater than 2.0 meters in diameter designed to uplink to communications satellites for transmission of data.
TOWER - A lattice structure or framework, or Monopole that is designed to support Personal Wireless Service transmission, receiving and/or relaying antennas and/or equipment.
WIRELESS TELECOMMUNICATIONS OVERLAY DISTRICT (WTOD) - Specific area(s), determined by engineering analysis to contain sites where Adequate Service may be provided to the Town of Lenox, which, at the same time, have the potential of reducing or mitigating negative impacts in accordance with Section 15.5.1 of this bylaw. The Overlay District is defined in Section 15.0 - 15.4 of this Bylaw.

15.5.4 EXEMPTED WIRELESS TELECOMMUNICATIONS USES:

This Article specifically exempts the following wireless telecommunications facilities: police, fire, ambulance and other emergency dispatch; citizens band radio. Amateur radio towers used in accordance with the terms of any amateur radio service license issued by the FCC, are exempt, provided that (1) the tower is not used or licensed for any commercial purpose; and (2) the tower shall be removed upon loss or termination of said FCC license. No Personal Wireless Service Facility or Repeater shall be considered exempt from this Article

for any reason whether or not said Facility or Repeater is proposed to share a Tower or other structure with such exempt uses.

15.5.5 PROVISION OF INDEPENDENT CONSULTANTS:
A. Upon submission of an Application for any Special Permit under this Article, the Applicant shall pay a review fee determined by the SPGA, *** *consisting of reasonable costs to be incurred by the SPGA for the employment of independent consultants.* These Consultants shall each be qualified professionals with a record of service to municipalities in one of the following fields: a) telecommunications engineering, b) structural engineering, c) monitoring of electromagnetic fields, and, if determined necessary by the SPGA, d) other relevant fields of experience as determined by the SPGA.

*** *Or insert "under the terms of ZBA Policies and Procedures in accordance with Chapter 593 of the Acts of 1989."*

B. The SPGA shall select the Independent Consultant(s) after consultation with the Planning Board, the Board of Health, and the Conservation Commission, each of which shall propose a list of qualified candidates.

15.5.6. PROHIBITION OF TELEPORTS:
There shall be no Teleport(s) within the Town of Lenox.

15.5.7. WIRELESS TELECOMMUNICATIONS OVERLAY DISTRICTS:
A. Towers and Personal Wireless Service Facilities shall be located only within Wireless Telecommunications Overlay District(s) within the Town of Lenox. Repeaters may be located within these District(s), but are also allowed in the rest of the Town by Special Permit.

B. Access shall be provided to the Tower or Facility or Repeater Site by a roadway which respects the natural terrain, does not appear as a scar on the landscape and is approved by the SPGA and the Chiefs of all emergency services in the Town to assure emergency access at all times. Consideration shall be given to design which minimizes erosion, construction on unstable soils and on steep slopes.

15.5.8. APPLICATION REQUIREMENTS:
No Personal Wireless Service Facility, Tower, or Repeater shall be erected, constructed, or installed or undergo Major Modification without first obtaining a Special Permit from the SPGA in accordance with the requirements set forth herein. One or both of two kinds of Special Permits are required; a) A Facility/Tower Special Permit (henceforth F/TSP) for new Facility/Tower construction (or Major Modification Of An Existing Facility); b) A Repeater Special Permit (henceforth RSP) for Repeater(s) to be mounted on an existing, or newly permitted, Tower or structure (or Major Modification Of An Existing Repeater). If Applicant is applying for both Permits, they shall be submitted and examined concurrently.

A. 1.For Personal Wireless Service Facilities or Towers a F/TSP is required. Applicant must submit all information required in Section 15.5.8 (B) & (C):
2. For all Repeaters proposed for installation, an RSP is required. An RSP may be applied for by an Applicant who is currently applying for a F/TSP under this Article, or by an Applicant who has previously received a F/TSP under this Article or by an entity which is providing Personal Wireless Services to the Town of Lenox from a base station outside the Town. Applicant must submit all information required in Section 15.5.8 (D).

B. Adequate Coverage, Adequate Capacity, and Justification of Need for F/TSP:
1.Applicant shall provide written documentation of any Facility Site(s) in Lenox, and any sites in abutting towns located within eight miles of any boundary of the Town of Lenox, in which it has a legal or equitable interest, whether by ownership, leasehold or otherwise. For each such Facility Site, it shall demonstrate with written documentation that this Facility Site is not already providing, or does not have the potential by adjusting the Site, to provide Adequate Coverage and/or Adequate Capacity to the Town of Lenox. The documentation shall include, for each Facility Site listed;
a)the exact Tower location (in Longitude and Latitude, to degrees, minutes, seconds),
b)ground elevation above mean sea level at the Tower location,
c)height of Tower or structure,
d)type, manufacturer and model number of Antennas,
e)Antenna gain,
f)height of Antennas on Tower or structure,
g)output frequency,
h)number of channels,
i)power input and
j)maximum power output per channel.
Potential adjustments to these existing Facility Sites, including changes in Antenna type, orientation, gain, height or power output shall be specified. Radial Plots from each of these Facility Sites, as they exist, and with adjustments as above, shall be provided as part of the Application.

2. Applicant shall demonstrate with written documentation that they have examined all existing Facility Sites located in Lenox and in any sites in abutting towns located within eight miles of any boundary of the Town of Lenox, in which Applicant has no legal or equitable interest, whether by ownership, leasehold or otherwise to determine whether those existing Facility Sites can be used to provide Adequate Coverage and/or Adequate Capacity to the Town of Lenox. The documentation shall include, for each existing Facility Site examined,
a) the exact Tower location (in Longitude and Latitude, to degrees, minutes, seconds),
b) ground elevation above mean sea level at the Tower location,
c) height of Tower or structure,
d) type, manufacturer and model number of proposed Antennas,
e) proposed Antenna gain,
f) height of proposed Antennas on Tower or structure,
g) proposed output frequency,
h) proposed number of channels,
i) proposed power input and

j) proposed maximum power output per channel

Radial Plots from each of these existing Facility Sites, configured as documented above, shall be provided as part of the Application.

3. Applicant shall demonstrate with written documentation that they have analyzed the feasibility of Repeaters in conjunction with all existing Facility Sites listed in compliance with Section 15.5.8 (B) (1) & (2) (above) to provide Adequate Coverage and/or Adequate Capacity to the Town of Lenox. Radial Plots of all Repeaters considered for use in conjunction with these Facility Sites shall be provided as part of the Application.

C. Required Documentation for F/TSP:

The Applicant shall include reports prepared by one or more professional engineers, which shall demonstrate that the Personal Wireless Service Facility and Tower comply with all applicable standards of the Federal and State governments. Specifically:

1. Copies of all submittals and showings pertaining to: FCC licensing; Environmental Impact Statements; FAA Notice of Construction or Alteration; Aeronautical Studies; and, all data, assumptions and calculations relating to service coverage and power levels regardless of whether categorical exemption from Routine Environmental Evaluation under the FCC rules is claimed.
2. Copies of all information submitted in compliance with requirements of Massachusetts Department of Public Health, 105 CMR 122 nonionizing radiation limits for: the general public from non-occupational exposure to electromagnetic fields, employees from occupational exposure to electro-magnetic fields, and exposure to microwave ovens, or any revisions thereof as the Department of Public Health may, by written notice, create.
3. The exact legal name, address or principal place of business and phone number of the Applicant. If any Applicant is not a natural person, it shall also give the state under which it was created or organized.
4. The name, title, address and phone number of the person to whom correspondence or communications in regard to the application are to be sent. Notice, orders and other papers may be served upon the person so named, and such service shall be deemed to be service upon the Applicant.
5. Name, address, phone number, and written consent to apply for this permit, of the owner of the property on which the proposed Personal Wireless Service Facility and/or Tower shall be located, or of the owner(s) of the Tower or structure on which the proposed Personal Wireless Service Facility shall be located.
6. The documentation shall include, for each Facility Site listed, the exact Tower or Repeater location (in Longitude and Latitude, to degrees, minutes, seconds) and by street address or Pole number (if applicable), ground elevation above mean sea level at the Tower or Repeater location and proposed height of Tower or structure.
7. Required Plans and engineering plans, prepared, stamped and signed by a Professional Engineer licensed to practice in Massachusetts. (Note: survey plans shall also be stamped and signed by a Professional Land Surveyor registered in Massachusetts.) Plans shall be on 24" x 36" sheets, on as many sheets as necessary, and at scales which are no smaller (i.e. no less precise) than listed below in Section 15.5.8 (C)(7)(a-d). Each plan sheet shall have a title block indicating the project title, sheet title, sheet number, date, revision dates, scale(s), and original seal and signature of the P.E. and other professionals who prepared the plan.
8. Applicant shall, as part of its application, provide the SPGA with the following plans and maps:

a. Proposed Site Plans: Proposed Facility Site layout, grading and utilities at a scale no smaller than 1" = 40' (1:480 or metric equivalent 1:500) showing the entire vicinity within a 400' radius of the Tower site with topography drawn with a minimum of 2' (0.6 meter) contour interval. The Site Plan shall show existing utilities, property lines, existing buildings or structures, stone walls or fence lines, wooded areas, individual trees with diameters greater than 12" within a 200' radius from the base of the proposed Tower (labeled with their current heights). Show the boundary of any wetlands or floodplains or watercourses, and of any bodies of water within 200' from the Tower or any related facilities or access ways or appurtenances. The Site Plan must have been completed, on the ground, by a Professional Land Surveyor within two years prior to the application date.

i. Proposed Tower location and any appurtenances, if any, and any accessory building (Communication Equipment Shelter or other). Indicate property boundaries of the Overlay District and setback distances to the base(s) of the Tower and to the nearest corners of each of the appurtenant structures to those boundaries, and dimensions of all proposed improvements.

ii. Indicate proposed spot elevations at the base of the proposed Tower and at the base of any guy wires, and the corners of all appurtenant structures.

iii. Proposed utilities, including distance from source of power, sizes of service available and required, locations of any proposed utility or communication lines, and whether underground or above ground.

iv. Limits of areas where vegetation is to be cleared or altered, and justification for any such clearing or alteration.

v. Any direct or indirect wetlands alteration proposed.

vi. Detailed plans for drainage of surface and/or sub-surface water; plans to control erosion and sedimentation both during construction and as a permanent measure.

vii. Plans indicating locations and specifics of proposed screening, landscaping, ground cover, fencing, etc; any exterior lighting or signs.

viii. Plans of proposed access driveway or roadway and parking area at the Facility Site. Include grading, drainage, travelled width. Include a cross section of the access drive indicating the width, depth of gravel, paving or surface materials.

b. Proposed Tower and Appurtenances:

i. Plans, elevations, sections and details at appropriate scales but no smaller than 1" = 10'.

ii. Two cross sections through proposed Tower drawn at right angles to each other, and showing the ground profile to at least 100 feet beyond the limit of clearing. Indicate proposed spot elevations at the base of the proposed Tower. Dimension the proposed height of tower above average grade at Tower Base. Indicate the maximum allowable structural height of the Tower after addition of any modular sections. Show all proposed antennas, including their location on the Tower.

iii. Details of typical Tower foundation, including cross sections and details. Show all ground attachments, specifications for anchor bolts and other anchoring hardware.

iv. Detail proposed exterior finish and camouflage of the Tower.

v. Indicate relative height of the Tower to the tops of surrounding trees as they presently exist.

vi. Illustration of the modular structure of the proposed Tower indicating the heights of sections which could be removed or added in the future to adapt to changing communications conditions or demands.

vii. A Structural Professional Engineer's written description of the proposed Tower structure and its capacity to support additional Antennas or other communications facilities at different heights and the ability of the Tower to be shortened if future communications facilities no longer require the original height.

viii. A description of Available Space on the tower, providing illustrations and examples of the type and number of Personal Wireless Service Facilities which could be mounted on the structure.

c. Proposed Communications Equipment Shelter:
i. Floor Plans, elevations and cross sections at a scale of no smaller than 1/4" = 1' (1:48) of any proposed appurtenant structure.
ii. Representative elevation views, indicating the roof, facades, doors and other exterior appearance and materials.
d. Proposed Equipment Plan:
i. Plans, elevations, sections and details at appropriate scales but no smaller than 1" = 10'.
ii.Number of Antennas and Repeaters (if any), as well as the exact locations of all Repeaters (if any) located on a map as well as by Degrees, minutes and seconds of Latitude and Longitude.
iii. Mounting locations on Tower or structure, including height above ground.
iv. Antenna type(s), manufacturer(s), model number(s).
v. For each Antenna, the Antenna gain and Antenna radiation pattern.
vi. Number of channels per Antenna, projected and maximum.
vii. Power input to the Antenna(s).
viii. Power output, in normal use and at maximum output for each Antenna and all Antennas as an aggregate.
ix. Output frequency of the Transmitter(s).
e.Balloon Test:

Within 35 days of submitting an Application, Applicant shall arrange to fly, or raise upon a temporary mast, a three foot diameter brightly colored balloon at the maximum height and at the location of the proposed Tower. The dates, (including a second date, in case of poor visibility on the initial date), times and location of this balloon test shall be advertised, by the Applicant, at 7 and 14 days in advance of the first test date in a newspaper with a general circulation in the Town of Lenox. The Applicant shall inform the SPGA and the Planning Board, in writing, of the dates and times of the test, at least 14 days in advance. The balloon shall be flown for at least four consecutive hours sometime between 9:00 am and 5:00 pm of the dates chosen.

D. Application Requirements for RSP:
The use of Repeaters to assure Adequate Coverage, or to fill holes within areas of otherwise Adequate Coverage, while minimizing the number of required Towers is permitted and encouraged. An Applicant who has received, and is in compliance with a current F/TSP under this Article, or an entity which is providing Personal Wireless Services to the Town of Lenox from a base station outside the Town, may apply for a RSP. Applicants shall provide the following information:

1.a) the exact location (in Longitude and Latitude, to degrees, minutes, seconds), as well as by street address or Pole number (if applicable)
b) ground elevation,
c) type, manufacturer and model number of proposed Repeater,
d) height of proposed Repeater above ground,
e) proposed output frequency,
f) proposed number of channels,
g) proposed power input and
h) proposed maximum power output per channel
i) Radial Plots from any proposed Repeater(s), configured as documented above, shall be provided as part of the Application.

2. Name, address, phone number, and written consent to apply for this permit, of the owner of the property on which the proposed Repeater shall be located, and of the owner(s) of the Tower or structure on which the proposed Repeater shall be located.

3. Proposed Repeater Site layout, grading and utilities at a scale no smaller than 1" = 40' (1:480 or metric equivalent 1:500) showing the entire vicinity within a 300' radius of the Repeater site with topography drawn with a minimum of 2' (0.6 meter) contour interval.
a)Proposed Repeater location and any appurtenances, if any, and any accessory building (Communication Equipment Shelter or other). Indicate property boundaries of abutters within 300' of the Repeater, and dimensions of all proposed improvements.

b) Limits of areas where vegetation is to be cleared or altered, and justification for any such clearing or alteration.
c) Plans of any proposed access driveway or roadway and parking area at the Repeater site. Include grading, drainage, travelled width. Include a cross section of the access drive indicating the width, depth of gravel, paving or surface materials.

15.5.9. GENERAL REQUIREMENTS FOR F/TSP(S):
A. A Special Permit shall not be granted for a Tower to be built on speculation. If Applicant is not simultaneously installing a Personal Wireless Service Facility on the Tower, it shall provide a copy of its existing lease/contract with a Personal Wireless Service Provider. Said Provider shall provide all necessary data to comply with the terms of this Article, as a part of Applicant's application for a F/TSP or the Special Permit shall not be granted.
B. Applicant shall provide a written, irrevocable commitment valid for the duration of the existence of the Tower, to rent or lease Available Space for co-location on the Tower at fair-market prices and terms, without discrimination to other Personal Wireless Service Providers.
C. Tower(s) shall minimize, to the extent feasible, adverse visual impacts on the environment. The SPGA may impose reasonable conditions to ensure this result, including, but not limited to, requiring the use of camouflage, painting, lighting standards and screening.

D. There shall be no clearing at a distance in excess of 25 feet in radius from the base of the Tower except where the access drive is located.

E. Fencing: The area around the Tower and Communication Equipment Shelter(s) shall be completely fenced for security within an area no greater than 25 feet in radius from the base of the tower, and to a height of six feet, and gated. Use of razor wire is not permitted.

F. Signs: There shall be no signs, except the following. A sign no greater than two (2) square feet indicating the name of the Personal Wireless Service Facility's owner(s) and a 24 hour emergency telephone number shall be posted adjacent to the entry gate. In addition, No Trespassing or other warning signs may be posted on the fence. All signs shall conform to the sign requirements of this bylaw, Sections 7.1 - 7.9.

G. Communication Equipment Shelters and Accessory Buildings shall be designed to be architecturally similar and compatible with each other, and shall be no more than 12 feet high. The buildings shall be used only for the housing of equipment related to this particular site. Whenever possible, the buildings shall be joined or clustered so as to appear as one building.

H. New Towers shall be the lesser of (a)105 feet (measured from ground level to the highest point on the Tower), or (b) the minimum height determined by the independent consultant(s) to provide the applicant Adequate Coverage from the Personal Wireless Service Facility(s) proposed for use on the Tower.

I. Towers shall be located at least one and one half times their maximum structural height within the outer boundary of any Wireless Telecommunications Overlay District(s).

J. Tower Finish: The SPGA shall have the right to determine the type of construction of the Tower(s) (either monopole or lattice), as well as the type(s) of camouflage, painting, or finish. The SPGA may require Tower(s) to resemble or mimic a native coniferous species of tree to minimize their adverse visual impact.

K. Tower(s) must be placed to minimize visual impacts.

L. All network interconnections to and from the telecommunications site and all power to the site shall be installed underground. At the initial construction of the access road to the site, sufficient conduit shall be laid to accommodate the maximum possible number of Personal Wireless Service Providers licensed to provide services to the Town of Lenox and surrounding areas.

M. If primary coverage (greater than 50%) from proposed Personal Wireless Service Facility is outside Lenox, then the permit may be denied unless the Applicant demonstrates to the satisfaction of the SPGA that the Applicant is unable to locate within the Town which is primarily receiving service from the proposed Facility.

N. Unless required by the Federal Aviation Administration, no night lighting of Towers, or the Personal Wireless Service Facility, is permitted, except for manually operated emergency lights for use only when operating personnel are on site.

O. No Tower or Personal Wireless Service Facility that would be classified as a hazard to air navigation, as defined by the Federal Aviation regulations (Title 14 CFR) is permitted.

P. No Tower or Personal Wireless Service Facility with the exception of Repeaters shall be located within any of the following prohibited areas:
1. Massachusetts or federally regulated wetland;
2 A Massachusetts Certified Vernal Pool;
3. The habitat of any State-listed Rare or Endangered Wildlife or Rare Plant Species;
4. Within 100' horizontally from any Massachusetts regulated wetland;
5. Within 200' horizontally of the Outer Riparian Zone of any river or perennial stream;
6. Within 500' horizontally from any Historic District or property listed or eligible to be listed on the state or federal Register of Historic Places;
7. Within 500' horizontally from any known archaeological site.

Q. No Repeater shall be located closer than 50' to an existing Dwelling Unit, nor less than 25' above ground.

R. The SPGA may require the use of screening, painting or camouflage to reduce the visual impacts of Repeaters.

S. Repeaters shall be located so as to have the least possible impact on the views of the residents of the Town of Lenox.

15.5.10. EVALUATION BY INDEPENDENT CONSULTANTS.

15.5.11. APPROVAL CRITERIA:
A. In acting on any Special Permit Application, the SPGA shall proceed in accordance with the procedures and timelines established for Special Permits in Section 11.4 of the Bylaw.
B. In addition to the findings required by the Bylaw in Section 6.1.1, the SPGA shall, in consultation with the Independent Consultant (s), make all of the applicable findings before granting the Special Permit, as follows:
1. That Applicant is proposing to locate its Personal Wireless Service Facility or Tower (other than Repeaters) within a Wireless Telecommunications Overlay District; and
2.That Applicant is not able to use Existing Towers/Facility Sites in or around the Town of Lenox, either with or without the use of Repeaters, to provide Adequate Coverage and/or Adequate Capacity to the Town of Lenox; and
3.That proposed Personal Wireless Service Facility/Tower or Repeater will not have an undue adverse impact on historic resources, scenic views, residential property values, natural or man-made resources; and
4.That the Applicant has agreed to implement all reasonable measures to mitigate the potential adverse impacts of the Towers and Facilities; and
5.That the proposal shall comply with FCC 96-326 and any and all other applicable FCC regulations, regarding emissions of electromagnetic radiation and that the required Monitoring program is in place and shall be paid for by the Applicant.
C. Any decision by the SPGA to deny an Application for a Special Permit under this Article shall be in conformance with SEC. 332 [47 U.S.C. 332] (7)(B)(ii),(iii) of the Act, in that it shall be in writing and supported by substantial evidence contained in a written record.

15.5.12. Monitoring and Evaluation of Compliance:
A. Initial Monitoring: It shall be a condition of any Special Permit granted under this bylaw that:
B. Pre-testing: After the granting of a Special Permit and before Applicant's Personal Wireless Service Facilities begin transmission, the applicant shall pay for an Independent Consultant, hired by the Town, to Monitor the background levels of EMF radiation, around the proposed Facility Site and/or any Repeater locations to be utilized for Applicant's Personal Wireless Service Facilities. The Independent Consultant shall use the Monitoring Protocol. A report of the Monitoring results shall be prepared by the Independent Consultant and submitted to the Board of Selectmen, the Planning Board, the Board of Health, the Building Inspector and the Town Clerk, in order to determine the Tower and Facility's or Repeater's radio frequency emissions and their compliance with FCC regulations,
C. Initial Test: The Applicant shall, after the granting of a Special Permit and within 30 days of the date that Applicant's Personal

Wireless Service Facility(s) or Repeater(s) begin(s) transmission, pay for an Independent Consultant, hired by the Town, to Monitor the levels of EMF radiation, around the proposed Facility and/or Repeater Site(s). The Independent Consultant shall use the Monitoring Protocol. A report of the Monitoring results shall be prepared by the Independent Consultant and submitted to the Board of Selectmen, the Planning Board, the Board of Health, the Building Inspector and the Town Clerk.

D. Ongoing Monitoring: It shall be a condition of any Special Permit granted under this bylaw that, in order to determine ongoing compliance with FCC regulations, after transmission begins, the owner(s) of any Personal Wireless Service Facility(s) or Repeater(s) located on any Facility or Repeater Site shall pay for an Independent Consultant, hired by the Town, to conduct testing and Monitoring of EMF radiation emitted from said Site, and to report results of said Monitoring, as follows:

1. There shall be routine annual Monitoring of emissions by the Independent Consultant using actual field measurement of radiation, utilizing the Monitoring Protocol. This Monitoring shall measure levels of EMF radiation from the Facility Site's primary Antennas as well as from Repeater Site(s) (if any). A report of the Monitoring results shall be prepared by the Independent Consultant and submitted to the Board of Selectmen, the Planning Board, the Board of Health, the Building Inspector and the Town Clerk.

2. Any Major Modification of Existing Facility, or the activation of any additional permitted channels, shall be cause for new Monitoring in accordance with Sections 15.5.12 (C) & (D)(1) above.

E. Excessive Emissions: Should the Monitoring of a Facility or Repeater Site reveal that the Site exceeds the FCC 96-326 standard, or any other applicable FCC standard, then the owner(s) of all Facilities utilizing that Site shall be so notified. The owner(s)shall submit to the SPGA and the Building Inspector a plan for the reduction of emissions to a level that complies with the FCC 96-326 standard and any and all other applicable FCC regulations within 10 business days of notification of non-compliance. That plan shall reduce emissions to the applicable FCC standard within 15 days of initial notification of non-compliance. Failure to accomplish this reduction of emission within 15 business days of initial notification of non-compliance shall be a violation of the Special Permit and subject to penalties and fines as specified in Section 13.8 of the Bylaw. Such fines shall be payable by the owner(s) of the Personal Wireless Service Facilities with Antennas on the Facility Site, until compliance is achieved.

F. Structural Inspection: It shall be a condition of the Special Permit that, Tower owner(s) shall pay for an Independent Consultant (a licensed professional structural engineer), hired by the Town, to conduct inspections of the Tower's structural integrity and safety. Towers shall be inspected every five years. A report of the inspection results shall be prepared by the Independent Consultant and submitted to the Board of Selectmen, the Planning Board, the Board of Health, the Building Inspector, and the Town Clerk. Any Major Modification of Existing Facility which includes changes to Tower dimensions or antenna numbers or type shall require new structural inspection.

G. Unsafe Structure: Should the inspection of any Tower reveal any structural defect(s) which, in the opinion of the Independent Consultant render(s) that Tower unsafe, the following actions must be taken. Within 10 business days of notification of unsafe structure, the owner(s) of the Tower shall submit a plan to remediate the structural defect(s). This plan shall be initiated within 10 days of the submission of the remediation plan, and completed as soon as reasonably possible. Failure to accomplish this remediation of structural defect(s) within 10 business days of initial notification shall be a violation of the Special Permit and subject to penalties and fines as specified in 13.8 of the Bylaw. Such fines shall be payable by the owner(s) of the Tower, until compliance is achieved.

15.5.13. REMOVAL REQUIREMENTS:

Any Personal Wireless Service Facility or Repeater which ceases to operate for a period of one year shall be removed. Cease to operate is defined as not performing the normal functions associated with the Personal Wireless Service Facility or Repeater and its equipment on a continuous and ongoing basis for a period of one year. At the time of removal, the Facility or Repeater Site shall be remediated such that all Personal Wireless Service Facility or Repeater improvements which have ceased to operate are removed. If all Facilities on a Tower have ceased to operate, the Tower shall also be removed, and the Facility or Repeater Site, including any access road(s) which lead to that Facility or Repeater Site from the main access road, shall be revegetated. If all Facility or Repeater Sites have ceased to operate, the owner of the last Personal Wireless Service Facility or Repeater to leave the site shall revegetate the access road in its entirety. Existing trees shall only be removed with the written permission of the SPGA, and only if the SPGA determines such removal of trees to be necessary to complete the required removal of Personal Wireless Service Facility(s) or Repeater(s).

15.5.14. PERFORMANCE GUARANTEES:

A. Applicant shall, as a condition of the Special Permit:

1.Post an initial cash bond in a reasonable amount determined and approved by the SPGA. This bond shall be in force to cover the costs of the remediation of any damage to the landscape which occurs during the clearing of the Site; and to cover the cost of the removal of the Tower or Facility or Repeater from the Site, and remediation of the landscape, should the Facility or Repeater cease to operate.

2.Post a maintenance bond for the access road(s), site(s) and tower(s) in amounts approved by the SPGA.

15.5.15. FEES AND INSURANCE:

A. Towers, Personal Wireless Service Facilities and Repeaters shall be insured by the owner(s) against damage to persons or property. The owner(s) shall provide a Certificate of Insurance to the Selectmen's Office on an annual basis. The Town of Lenox shall be an additional named insured.

B. A schedule of fees for Personal Wireless Service Facility, Tower and Repeater permitting and renewal, any Monitoring of emissions and inspection of structures, and any other fees shall be established by the SPGA pursuant to M.G.L. c. 40A, Section 9. This schedule may be amended from time to time.

15.5.16. PERMIT EXPIRATION AND RENEWAL:

A. In accordance with Section 11.2.2 of the bylaw, any Special Permit granted under this section shall lapse if the Applicant fails to begin construction on the Facility or Tower or Repeater within a two year period of said grant.

B. All Special Permits granted under this section shall be granted for five years with the SPGA retaining the option, at their discretion, to renew said Special Permit for additional five year period(s), if the SPGA determines that the Tower and/or Facility and/or Repeater so permitted shall have been and shall remain in compliance with all terms and conditions of this bylaw and of any conditions placed upon the original Special Permit at the time of granting.

15.5.17. SEVERABILITY CLAUSE:

The invalidity of any section or provision of this Bylaw shall not invalidate any other section or provision hereof.

See Zoning Map entitled "Zoning Map of the Town of Lenox dated December 12, 1969, as Amended to show New Flood Plain Overlay, dated November 22, 1974".

Beginning at the intersection of West Mountain Road and Routes 7 and 20 and extending in a southerly direction to a point opposite New Lenox Road which marks the extension easterly of the northerly line of Parcel A as shown on a plan entitled “Plan of Parcels of Land to be Conveyed to Zide-Lash Associates in Lenox, Mass., Sept.,1972 Robert G. Brown & Assoc., Lee, Mass.”, recorded in the Berkshire Middle District Registry of Deeds in Book 417-G, Page 35. Thence westerly in said line 1,000 feet to a point which marks the westerly line of the present C-3A zone. Thence northerly in said westerly line to West Mountain Road. Thence easterly in West Mountain Road to the point of beginning. The above described parcel of land amended on the zoning map of Lenox from C-3A to C-1A

Last Updated: Friday, May 09, 2003

Search: Search

X C. Bonomolo

MORTON LEIFER PE.

ELECTRONIC COMMUNICATIONS SPECIALIST

TOWN OF CLARKSTOWN

To: The Technical Advisory Committee
From: Morton Leifer
Date: October 31, 2005
Re: TAC REVIEW Omnipoint Communications, Inc. (O&R Tower # 54) and Pearl River Elks Lodge, 2041 Elks Drive Nanuet.

I am in receipt of a letter dated October 11, 2005 from Cara M. Bonomolo of Snyder & Snyder regarding a proposal by Omnipoint Communications Inc. to site a wireless communications facility on O&R tower # 54 at 8 Red Rock Road New City. The issues raised by Ms. Bonomolo directly relate to Omnipoint's application for the Pearl River Elks Lodge as well.

Ms. Bonomolo is correct when she states that "Neither the Town of Clarkstown Code nor federal law (including the federal Telecommunications Act of 1966) limit the level of service that a federally licensed wireless carrier (such as Omnipoint) may provide)."

In fact the Telecommunications Act of 1996 is silent on defining, in a quantative way, a particular signal level that constitutes adequate coverage. There is, therefore, no federal mandate that dictates Clarkstown must approve Omnipoint's application requesting a signal level of –84dbm if that request makes it impossible for Clarkstown to fulfill it's obligations based on Local Law 17-1996 and other municipal prerogatives.

Ms. Bonomolo also admonishes that according to the Telecommunications Act of 1996 "no state or local statute or regulation, or other State or local legal requirement, may prohibit or have the effect of prohibiting the ability of any entity to provide any interstate or intrastate telecommunications service."

Requiring an applicant to abide by our local Wireless Communication Facilities law and suggesting alternate siting locations well within a mile of the requested site, where carriers can co-locate and limit the proliferation of cellular towers on private residential properties or near occupied buildings, in no way approaches the notion of prohibiting telecommunications service.

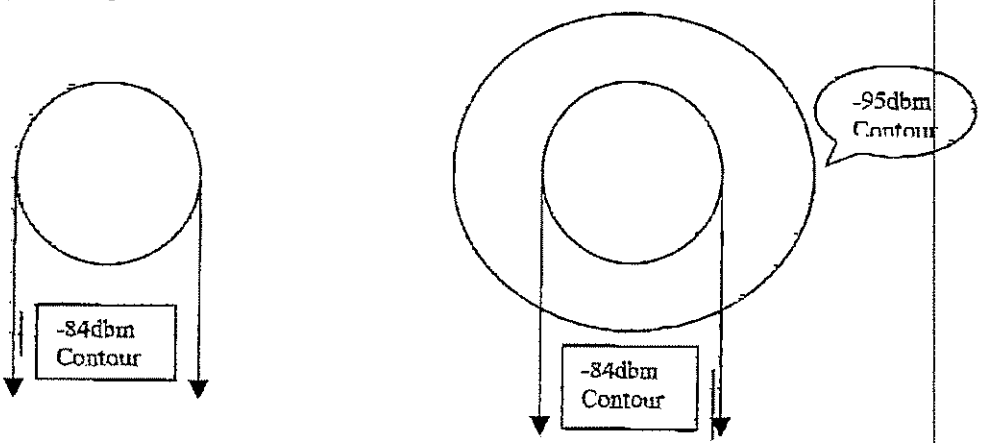
All wireless carriers are required to submit a report to the FCC regarding their fulfillment of providing coverage to their service areas. The FCC has adopted construction benchmarks for PCS licenses. All 30 MHz broadband PCS licensees must construct facilities that offer coverage to one-third of the population of their service area within five years, and two-thirds of the population within ten years, of their initial license grants. All 10 MHz and 15 MHz Block licensees must provide service to 25% of the service area within five years of their initial license, or make a showing of substantial service.

20 Maple Avenue New City New York 10956 845-406-0729 E-mail mortonleifer@optonline.net

TAC REVIEW Omnipoint Communications, Inc. (O&R Tower # 54) and
Pearl River Elks Lodge, 2041 Elks Drive Nanuet

In my conversations with several Radio Engineers familiar with these reports, the coverage contours used by the wireless industry to satisfy the FCC's coverage requirements are based on –95dbm contours, certainly not on –84dbm.

As a point of clarification, the issue of –95dbm or –84dbm does not affect the transmitted power of the cell site. The signal level diminishes inversely as the square of the distance from the cell site. Omnipoint wishes to consider the –84dbm contour as the end of the coverage area. Other carriers, including Omnipoint in the past, considered the more distant –95dbm signal level as the end of the coverage area. As shown below, the –84dbm contours are the same size in both diagrams and smaller in area than the -95dbm contour. By considering –84dbm as the end of the coverage area (diagram on the left), many more cell sites would be required to fill in the gaps that would otherwise be filled in by the larger –95dbm contour.



Adhering to the –84dbm contour may put nearby tower sites that are being designed for co-location, such as the one proposed at the Department of Transportation maintenance yard at exit 7 of the PIP, just out of the coverage range designated by the applicant, as is the case for the single use 120 foot tower proposed by Omnipoint at the Elks Club. Wireless Antennas would have to be installed on private residential properties, as is the case for Omnipoint's application on Red Rock Road in New City.

In order for the Town of Clarkstown to comply with the FCC provision "not to unreasonably discriminate among providers of functionally equivalent Services", all of the carriers licensed to provide service in Clarkstown would be entitled to single use towers wherever necessary to accommodate their –84dbm coverage demands.

This issue is not unique to the Town of Clarkstown. I have been in contact with Planning and Land-Use officials in the Town of Lenox Mass. Their municipal code specifies adequate wireless signal coverage to be –95dbm. Omnipoint submitted a proposal requesting –84dbm coverage. The planning board rejected their proposal based on Omnipoint's insistence on keeping the –84dbm signal level, which violated the Town law. Omnipoint appealed the decision and the matter is now in federal court.

TAC REVIEW Omnipoint Communications, Inc. (O&R Tower # 54) and
Pearl River Elks Lodge, 2041 Elks Drive Nanuet

I have been in touch with Peggy Ammendola, Land Use Clerk for the Town of Lenox Mass. I have also communicated with Shawn Leary Considine, Attorney for the Zoning Board of Appeals and the Building inspector of the Town of Lenox. I also have had conversations with David Maxon, President of Broadcast Signal Lab of Medfield, Mass who has served as the technical consultant to the Lenox Planning Board. Mr. Maxon is very knowledgeable and experienced in municipal wireless issues and I have attached information about his company to this report.

I have attached the full text of the Town of Lenox's Zoning Board of appeals Decision rejecting Omnipoint's application.

I have also attached to this report several E-mail communications I have had with the officials named above to help put this report in proper perspective.

The similarities of the issues being considered by the Town of Lenox and those relating to this report are not merely coincidental.

–95 dbm has been considered adequate signal level coverage for many years by the wireless industry and by many municipalities, to the extent that it is written into the Town law of many municipal jurisdictions. Omnipoint has made a business decision to require a signal level that is 63.1 times stronger than the previous de-facto standard. The smaller coverage contours of –84dbm require significantly more wireless towers, which also greatly enhance the capacity (the number of simultaneous users) the wireless system can handle. The Town of Lenox denied the Omnipoint application and the matter is now in federal court.

What is happening in the Town of Lenox is important and relevant to Clarkstown because the applicant is Omnipoint, the issue is –95dbm versus –84dbm signal level and most importantly, the issue is in federal court.

I suggest that it would be prudent on the part of the applicant and the Town to defer further consideration of this matter until the court's decision is issued.

Subject: ZBA decision (actually 3-2)
From: "Shawn P. Leary" <shawnpleary@adelphia.net>
Date: Fri, 28 Oct 2005 08:43:30 -0400
To: <mleifer@sunyrockland.edu>

TOWN OF LENOX
ZONING BOARD OF APPEALS
DECISION

At a Public Hearing on June 16, 2004 which was continued to August 18, 2004, to September 14, 2004, to November 17, 2004, to February 2, 2005, to March 9, 2005 and to April 6, 2005 (Petitioner having waived its right to a decision within 90 days of filing) the Lenox Zoning Board of Appeals (the "Board") heard the Petition of Tower Ventures II, LLC and the Rose Nominee Realty Trust ("Petitioners") for a Special Permit under Section 15.5.8 of the Lenox Zoning Bylaw and for Variances from Lenox Zoning Bylaw Sections 15.5(9)(D)(Clearing Limits), 15.5(9)(I)(Overlay District Setback), 15.5(9)(H)(Height Requirements), 15.5(7)(A)(Use Outside District), 15.5(11)(B)(1)(Use Outside District), 15.5(15)(A)(Town as Named Insured), and 15.5(16)(Term of Special Permit), to permit construction of a new Personal Wireless Service Facility ("the Facility") including a 130-foot tall monopole tower and associated equipment, at property located at 30 Lee Road (Map 3, Parcel 53) in the R-1A zone ("the Property"). Members of the Zoning Board of Appeals hearing the Petition were Harold Brown, Shawn Leary Considine, Jedd Hall, Daniel Mintz, and Clifford Snyder.

The property, currently owned by Petitioner Rose Nominee Realty Trust, is located near Routes 7 & 20 in a residential zone and outside the Wireless Telecommunications Overlay District established under Section 15 of the Lenox Zoning Bylaws. Petitioner Tower Ventures II, LLC, proposed to construct, operate and maintain a cell tower on the property, intending to rent space on the tower to its customer and co-applicant, Omnipoint Holdings, Inc., known as T-Mobile USA.

In an effort to better understand the technical aspects of Petitioners' application, the Zoning Board of Appeals retained an expert in the field, David Maxson, of Broadcast Signal Lab, LLP, of Medfield, Massachusetts, who advised the Board throughout the hearing process.

At the hearings before the Zoning Board, Petitioner Tower Ventures II, LLC submitted evidence in an effort to show that a significant gap in T. Mobile's PCS mobile telephone service existed in southern Lenox and along Routes 7 & 20 which would be filled by the proposed facility, and that all reasonable alternatives to the proposed facility had been exhausted by the Petitioner.

Section 15.5.3 of the Zoning Bylaws defines "adequate coverage" for service to be where the median field strength of the transmitted signal is greater than –95 dbm. Petitioner's evidence showing

a gap relied primarily on coverage maps for which -84 dbm was the stated standard. –84 dbm is a higher threshold for coverage than –95 dbm. With respect to alternatives to the proposed site, Petitioner presented evidence that five nearby alternatives had been explored (see Tab 7 of Petition), but abutters and others who appeared at the Hearing in opposition to the project suggested additional alternative sites including Trinity Church, Cranwell Resort, Blantyre, Caligari's, the State Police Barracks in Lee, and a privately owned, residential property on Laurel Lake. Petitioner followed up on these properties and reported that a tower atop Trinity Church would complement the proposed tower but not replace it. Mr. Maxson agreed with this judgment. The other suggested alternatives were determined to be unworkable by the Petitioners. Mr. Maxon also submitted an analysis of such alternatives, concluding that a combination of sites including Caligari's, the lakefront property, and the State Police Barracks could present a satisfactory solution to T. Mobile's coverage gap, as could some combination of lower towers at alternate sites.

At the Public Hearing, eight neighbors and abutters, including property owners and representatives of Cranwell and Canyon Ranch, spoke in opposition to the tower based on its location in a residential district, its requirement of numerous variances from the Lenox Zoning Bylaw, and its visibility above the tree line in a rural area. Numerous letters were also read into the record. The Lenox Planning Board Board submitted a recommendation against construction of the facility because of its location outside the Overlay District. The Lenox Conservation Commission noted its view that, if constructed, the tower should be moved farther from the wetlands that exist on the property.

At its Decision Meeting held on April 6, 2005, Zoning Board of Appeals members initially discussed and voted on the Petitioners' request for a Special Permit to construct the facility under Section 15.5.8 of the Bylaw. Various members expressed concern that the town's Overlay District was outdated; that a town Master Plan was needed to prevent numerous, piecemeal applications for construction of towers; and that Petitioners' coverage maps were based on a standard more stringent than the Bylaw requires. Based on the requirements of federal law, the Zoning Bylaw, and the facts presented, Board members then voted on whether to grant the Special Permit. By a vote of 2 in favor, 3 opposed, the Special Permit was denied. Shawn Leary Considine and Daniel Mintz voted in favor, finding that a substantial gap in service had been demonstrated by the Petitioners and that no reasonable alternatives appeared to exist. The remaining members, however, found that no substantial gap had been shown, in part because the Petitoners had based their coverage maps on a more stringent service standard than the standard of the town Bylaws. The remaining members also determined that the Petitioners had not adequately investigated all reasonable alternatives to the proposed tower, including other sites and a reduction in height of the proposed tower or shorter towers at other sites.

Although conceding that the matter of Variances was probably moot, Board members then discussed voted on each Variance request in order to ensure that the record of the hearing contained

sufficient background as to their reasoning. The Variance to permit additional clearing around the tower area was denied by a vote of 4-1, on findings of lack of hardship and detriment to neighborhood. The height Variance to permit construction of a 130-foot tower was denied by a vote of 5-0, on findings that no evidence was presented of coverage at a height conforming to the Bylaw. The Variance from the setback requirement of the Overlay District provisions was granted by a vote of 5-0. The Variance from the requirement that the tower be built within the Overlay District was granted, as members were in agreement that the Overlay District itself was outdated. However, members also noted their opposition to the location of mobile phone towers in residential districts such as the one targeted by the Petitioners. The Variance that would have named Lenox as an additionally insured party was approved by a vote of 5-0. And the Variance that would have extended the renewal date of the project was denied by a vote of 5-0, with members noting that no such renewals have been granted to other tower ventures and that no hardship was shown to justify such a variance.

Members concluded the meeting with a discussion of their intent—which was not to prevent construction of personal wireless facilities in Lenox, but rather to insure that such facilities truly fill service gaps and that all appropriate, non-residential locations and tower heights are investigated when alternatives to proposed towers are considered.

This Petition was filed on April 30, 2004; advertisements were published in the Advocate on May 13 and May 20, 2004; the Public Hearing was held on June 16, 2004 and continued to August 18, 2004, to September 14, 2004, to November 17, 2004, to February 2, 2005, to March 9, 2005 and to April 6, 2005, and the Decision Meeting was held on April 6, 2005. Any appeal from this decision must be made pursuant to M.G.L. Chapter 40 A, Section 17, as amended, and must be filed within twenty (20) days of the filing of this Decision with the Lenox Town Clerk

Filed this 29th day of April, 2005, with the Lenox Town Clerk, the Planning Board, the Zoning Board of Appeals, and the Building Inspector.

Shawn Leary Considine
for the Lenox Zoning Board of Appeals

Subject: Re:referred by Peggy Ammendola
From: mleifer@sunyrockland.edu
Date: October 27, 2005 6:27 PM

To: shawnpleary@[redacted]
CC: landuse@townoflenox.com

Dear Shawn,

I had the good fortune of speaking, by phone, to Peggy Ammendola, when I called the Planning Board seeking clarification of section 15.5.2 and 15.5.3 of the Town of Lenox's Wireless Telecommunications Overlay District (Wtod). My question had to do with the definition of adequate coverage based on a -95dbm signal level and the notion that the rules in the (Wtod) are intended to be consistent with the Telecommunications Act of 1996.

I am an Electronic Communications Specialist with the Town of Clarkstown, NY and have been advising the Clarkstown Planning Board for many years regarding wireless issues. Over the years, the wireless carriers have submitted requests and coverage maps using -95dbm as the criterion for adequate coverage. They also claimed that they had a mandate from the FCC to provide seamless coverage in our area and therefore were entitled to special consideration in the placement of their cellular towers.

Just recently, Omnipoint (T-Mobile) submitted two applications which requested coverage at a signal level of -84dbm in the car. This is equivalent to -78dbm on the street which is almost 100 times the signal level they previously required and what Lenox's Wtod specifies.

To the extent that I could do research, I found the Telecommunications Act of 1966 silent on the issue of the definition of what constitutes adequate coverage. I did find the Town of Lenox's Wtod, and used it as the basis to recommend to the planning board that that applications be rejected.

The applicant responded in a very aggressive manner and challenged the planning board's authority to define the coverage that a wireless carrier's business plan requires.

The applicant indicated that the FCC mandate applies to any coverage level the carriers deem necessary to carry out their business plan.

My question to you, is how you have been able to define the coverage level in the Wtod in writing to be -95dbm?

Do you know of any official FCC document that defines adequate coverage to be -95dbm?

Any information you can provide would be very much appreciated by the Planning Board of the Town of Clarkstown.

Thank you for your time and consideration of this matter.

Morton Leifer PE.

Town of Clarkstown Police Department
20 Maple Avenue
New City NY 10956

Subject: Re:referred by Peggy Ammendola
From: shawnpleary@[redacted]
Date: October 28, 2005 8:14 AM

To: mleifer@sunyrockland.edu
CC: landuse@townoflenox.com

Dear Morton,
I am glad that Peggy was able to assist you. As for your specific question, you have identified a significant problem. Our Bylaw was written a number of years ago, and you may want to contact someone involved in the drafting (someone on the Lenox Planning Board) for an answer to why -95dbm was chosen as the standard. That said, -95dbm is the standard, and when T-Mobile came before the Zoning Board of Appeals earlier this year (in part for variances to permit a higher tower and different siting than the Bylaw permits) their entire presentation was based on the -.84dbm standard. And they did not ask for a Variance from the Bylaw's standard of -95dbm. I wrote the decision by which their application was denied by a vote of 4-1. One basis for our denial was the fact that they ignored the Lenox standard of coverage in favor of a standard they concocted themselves. This decision is now on appeal. So we shall see what the court says about this matter. If the court addresses the issue, that might be your best guidance here. I will e-mail you a copy of our decision. Shawn Leary Considine

Subject: Re: Referred by Peggy Ammendola
From: Morton Leifer <mleifer@sunyrockland.edu>
Date: October 28, 2005 2:01 PM

To: shawnpleary@[redacted]
CC: landuse@townoflenox.com

Dear Shawn,

I can't begin to tell you how much I appreciate your quick response and very helpful information.

As a technologist, I am not adverse to communications towers and understand their necessity to provide commercial and public safety communications.

What is unique about the Cellular and PCS industry, is that the number of wireless towers required in any given municipality has the potential to grow almost without limit, in order to satisfy the continuously growing capacity needs for voice, data, internet, video and audio streaming services they aggressively market.

Over the past several years, the Clarkstown planning board has had to consider the concerns of our constituents regarding the negative effect nearby cellular towers might have on the value of their property as well as the fear of adverse health effects due to the radio frequency exposure. The wireless industry, on the other hand, has a mandate from the FCC to provide seamless coverage throughout our area as well as, essentially, a waiver regarding the consideration of health effects due to the proximity of their towers.

With coverage maps based on the -95 dbm signal level, we have, up to now, managed to accommodate the seamless coverage required by the wireless industry while placing the towers away from close proximity and the direct view of our residential constituents.

The recent request of T-Mobile for a -84dbm (in car) signal level which is approximately -77 dbm on the street, presents quite a different problem for our municipality.

The signal level currently being requested by T-Mobile is 63.1 times stronger than their previous requests and require wireless towers to be placed significantly closer together to provide seamless coverage at that higher level.

The cooperative strategies previously used to accommodate the wireless industry while protecting the interests of our constituents are very much less likely to work at this significantly higher signal level.

The issue that must be considered, now, is to determine if the mandate that T-Mobile has to provide seamless cellular service, that was issued in 1996, applies to the new and very much larger -84dbm signal level they are now requesting.

The consequence of this determination is significant for the Town of Clarkstown. Our existing Town Telecommunications law would be incompatible with a mandate that requires seamless cellular coverage at the -84dmb (in car) level.

Wireless towers would have to be installed on private residential properties. The height and distance limitations specified in our Town law would have to be violated to provide seamless coverage at the -84dbm signal level. T-Mobile has already made application for sites that require these kinds of variances.

I am comforted by the fact that the town of Lenox is also confronting this issue. It would be useful for the town of Clarkstown to await the outcome of the current proceedings taking place at Lenox, especially because it involves the same wireless carrier.

Again, Shawn, I do appreciate the important information you have provided and do look forward to hearing from you again.

Morton Leifer PE.

Town of Clarkstown Police Department
20 Maple Avenue
New City NY 10956

From: "Shawn P. Leary" <shawnpleary@[redacted]>

To: "Morton Leifer" <mleifer@sunyrockland.edu>

Cc: "Lenox Land" <landuse@townoflenox.com>

Sent: Friday, October 28, 2005 9:25 PM

Subject: Re: referred by Peggy Ammendola

It may be that T-Mobile has made a company decision to base all its cell-tower applications on a -84dbm in-car standard, because that's certainly what happened in Lenox. At our hearing, they never mentioned the discrepancy themselves; it was up to us as a Board to identify it and question it. They, of course, had not much of an answer for us. I (and Peggy) will make a note to notify you when the Court's decision is issued. Good luck in the meantime. Shawn Leary Considine

Broadcast Signal Lab

Expert Review of Wireless Facility Applications

Broadcast Signal Lab, LLP provides wireless technology consulting services to municipalities considering wireless facility applications.

Wireless facility applications often include information regarding the proposed coverage of wireless facilities, requiring expert analysis of coverage claims. Local bylaws usually require proof of at least these two coverage criteria: 1) Proof of insufficient coverage in the area, and 2) proof that the proposed facility is the least intrusive means to achieve the necessary coverage. Also, towns often require that visual impact analysis, and considerations of alterative sites and technologies be included in the review of wireless applications. Other technical issues requiring review, such as tower lighting, safety, and structural codes, may arise in the process. Also, federal law requires that decisions be made based on substantial evidence in the written record.

Broadcast Signal Lab provides a full range of analysis of wireless facility applications and conducts application reviews in light of local regulations and preferences. A typical review process involves the following elements

- Participating in about two hearings.
- Visiting the proposed site and its locus, often in conjunction with a balloon- or crane-test.
- Reviewing application documents and any other evidence submitted to the record, validating technical statements, and addressing comments and questions from the reviewing board and the public.
- Assisting with documentation of coverage, visual impact, radio frequency energy safety, structural integrity, air navigation safety, alternatives analysis and such.
- Providing a written report, if determined to be necessary.
- Organizing and presenting the benefits and detriments of various options.
- Assisting with drafting a decision.
- When appropriate, working with applicant and community to develop an alternative solution that is most agreeable to all parties.

Typically, the cost for these services (if within 100 miles of Boston) ranges between $1500 and $3000, depending on the complexity of the proposal and alternatives, the number and length of hearings and meetings, and such factors as travel time. We recommend obtaining from applicants a deposit of $3000 for application review analysis, plus costs for consultants in any other disciplines that the reviewing board may wish to engage. Broadcast Signal Lab's hourly fee for principal consultant time is $185. Lesser rates are charged if Broadcast Signal Lab staff perform support duties, such as field or laboratory work or analysis. Broadcast Signal Lab principal, David Maxson, will be the primary contact and will participate in public hearings.

Broadcast Signal Lab, LLP
503 Main Street
Medfield, MA 02052
508 359 8833

Broadcast Signal Lab

Why Choose Broadcast Signal Lab?

Communities can be uncertain how to distinguish among the very few companies that can help them with their wireless facility concerns. What are the features that make a wireless consultant a good choice? Here is a description of how Broadcast Signal Lab serves local needs:

Engineering

Of course communities need qualified radio engineering expertise. Broadcast Signal Lab has been performing radio engineering forensic work since 1982, and for municipalities in wireless facility deployment since 1988. Our principals and staff are highly experienced in propagation analysis, signal measurement, safety analysis, facility design, and construction. We employ sophisticated propagation modeling software—a professional product that is used in the industry worldwide.

Facility Design and Placement

Our principals and staff have a breadth of experience in helping to evaluate and to deploy communications facilities. Principal David Maxson has managed, leased, and built towers over the years and holds a Massachusetts Contractor's License. He is fully versed in tower management issues, including contracts, codes, licensing, safety, design, permitting, and construction.

Municipal Wireless Issues

Mr. Maxson has been very active in the development of local bylaws that control the placement of wireless facilities in a manner that is responsible and oriented to local community needs. He has lectured on municipal wireless issues at meetings of the Massachusetts Association of Planning Directors, the Connecticut Chapter of the American Planning Association, the Citizen Planners Training Collaborative, New Hampshire Municipal Association, and the New Hampshire Lawyers' Guild, among others. As the prime wireless consultant to the Cape Cod Commission for the past seven years, Broadcast Signal Lab has helped protect the Cape's unique character while facilitating the sensible deployment of wireless services.

Expertise in Communicating Highly Technical Matters

Mr. Maxson has testified on radio engineering issues in federal and state court, and before the Congressional House Telecommunications Subcommittee. Perhaps more importantly, Mr. Maxson has participated in hundreds of public meetings on wireless facilities where he employs his skills as a trained instructor and communicator to present highly technical material in user-friendly ways. He understands that the role of a forensic analyst is not only to evaluate a complex technical issue and identify the most important facts, but also to communicate those facts in a manner that enables local authorities to make reasoned decisions supported by the evidence on the record.

Confidence

Broadcast Signal Lab is fully insured for workmen's compensation, general liability and professional errors and omissions. As a company providing municipal services, we take seriously our responsibilities to protect our clients from unnecessary risk. We are also well versed in professional and state conflict of interest requirements and carefully conduct our business in an ethical manner.

Summary

Broadcast Signal Lab's expertise spans a wide range of disciplines that are necessary for providing effective wireless consultation.

Broadcast Signal Lab, LLP
503 Main Street
Medfield, MA 02052
508 359 8833